What is claimed is:

1. A method of reducing spread of data on a network, comprising:

obtaining a spectral analysis of times of arrival of data packets at receiving nodes of said network from sending nodes of said network over predetermined time periods;

for each pair of sending node and receiving node, marking transmissions of data packets for said pair as marked transmissions when said spectral analysis indicates peak frequencies associated with said marked transmissions are different from peak frequencies associated with others of said transmissions for said pair over a window of a predetermined number of said time periods;

marking transmissions of data packets as interruptible transmissions when marked transmissions from pairs having at least one of a common sending node and a common receiving node and within a specified number of said windows have corresponding frequencies;

estimating timing and length information for future data packets corresponding to said interruptible transmissions; and

interrupting traffic of said future data packets based on said estimating.

2. The method of claim 1, wherein obtaining a spectral analysis comprises:

tracking times of arrival data;

transforming said times of arrival data into time-series;

parsing said time-series into said windows; and

obtaining Lomb periodograms for said windows.

3. The method of claim 1, wherein estimating comprises applying a Hidden Markov Model technique for classifying said interruptible transmissions as belonging to one of a plurality of classes of transmissions having determinable characteristics.

4. The method of claim 1, wherein interrupting comprises randomly removing data packets.

5. The method of claim 4, comprising:

interrupting for a specified time; and

determining, after said specified time, if a further spectral analysis of times of arrival of data packets since beginning said interrupting indicates said peak frequencies associated with said marked transmissions.

6. The method of claim 5, comprising returning to estimating based on said further spectral analysis when said further spectral analysis indicates said peak frequencies associated with said marked transmissions.

7. The method of claim 4, wherein obtaining a spectral analysis comprises:

tracking times of arrival data;

transforming said times of arrival data into time-series;

parsing said time-series into said windows; and

obtaining Lomb periodograms for said windows.

8. A method of reducing spread of data on a network, comprising:

obtaining, at a receiver node of said network, periodograms based on times of arrival of data packets from a sender node of said network;

comparing peak frequencies in successive ones of said periodograms for said sender node to determine if one of said periodograms includes a peak above a threshold at a frequency different from said peak frequencies in a preceding one of said periodograms;

determining if at least one peak above said threshold at said frequency occurs in one of a predetermined number of previous periodograms for said sender node;

determining if said at least one peak at said frequency occurs in at least one of a specified number of periodograms obtained at said receiver node for other sender nodes of said network;

estimating timing and length information for future data packets corresponding to said frequency when said at least one peak at said frequency does not occur in one of said predetermined number of previous periodograms for said sender node and when said at least one peak at said frequency occurs in at least one of said specified number of periodograms obtained at said receiver node for other sender nodes of said network; and

interrupting traffic of said future data packets corresponding to said frequency based on said estimating.

9. The method of claim 8, wherein obtaining said periodograms comprises:

tracking times of arrival data;

transforming said times of arrival data into time-series;

parsing said time-series into windows; and

obtaining Lomb periodograms for said windows.

10. The method of claim 8, wherein said estimating comprises classifying a data stream for said at least one peak at said frequency based on said periodograms using a Hidden Markov Model.

11. The method of claim 8, wherein interrupting comprises:

randomly removing data packets for a specified time;

determining, after said specified time, if said at least one peak at said frequency occurs in at least one additional periodogram based on times of arrival of data packets since beginning said interrupting; and

returning to estimating based on including said additional periodograms with said specified number of periodograms when said at least one peak at said frequency occurs in said at least one additional periodogram.

12. A method of reducing spread of data on a network, comprising:

obtaining, at a router node of said network, periodograms based on times of arrival of data packets from a sender node of said network;

comparing successive periodograms for said sender node to determine when at least one new peak above a threshold is present in one of said periodograms;

determining if said at least one new peak occurs in one of a predetermined number of previous periodograms for said sender node;

determining if said at least one new peak occurs in at least one of a specified number of periodograms obtained at said router node for other sender nodes of said network;

estimating timing and length information for future data packets corresponding to said at least one new peak when said at least one new peak does not occur in one of a predetermined number of previous periodograms for said sender node and when said at least one new peak occurs in at least one of said specified number of periodograms obtained at said router node for other sender nodes of said network; and

interrupting traffic of said data packets corresponding to said at least one new peak based on said estimating.

13. The method of claim 12, wherein interrupting comprises randomly removing data packets for a specified time.

14. The method of claim 13, wherein obtaining said periodograms comprises:

tracking times of arrival data;

transforming said times of arrival data into time-series;

parsing said time-series into windows; and

obtaining Lomb periodograms for said windows.

15. The method of claim 14, wherein said estimating comprises classifying a data stream for said at least one new peak based on said periodograms using a Hidden Markov Model.

16. A method of classifying disruptive data packet traffic flow on a network, comprising:

obtaining at a router, periodograms based on times of arrival of said data packets from nodes of said network;

comparing successive periodograms for each of said nodes to determine when at least one new peak above a threshold is present in one of said periodograms for one of said nodes;

marking said at least one new peak as a suspicious peak when said at least one new peak does not occur in one of a predetermined number of previous periodograms for said one of said nodes;

determining if said suspicious peak occurs in at least one of a specified number of periodograms obtained at said router for others of said nodes of said network;

determining if said suspicious peak occurs in at least one of said specified number of periodograms obtained at other routers for said one of said nodes; and

providing a signal to classify traffic flow corresponding to said suspicious peak as disruptive traffic flow when said suspicious peak occurs at least in at least one of said specified number of periodograms obtained at said router for said others of said nodes and in at least one of said specified number of periodograms obtained at said other routers for said one of said nodes.

17. A computer-readable medium containing instructions for controlling a processor to classify disruptive data packet traffic flow, by:

obtaining at a router, periodograms based on times of arrival of said data packets from nodes of said network;

comparing successive periodograms for each of said nodes to determine when at least one new peak above a threshold is present in one of said periodograms for one of said nodes;

marking said at least one new peak as a suspicious peak when said at least one new peak does not occur in one of a predetermined number of previous periodograms for said one of said nodes;

determining if said suspicious peak occurs in at least one of a specified number of periodograms obtained at said router for others of said nodes of said network;

determining if said suspicious peak occurs in at least one of said specified number of periodograms obtained at other routers for said one of said nodes; and

providing a signal to classify traffic flow corresponding to said suspicious peak as disruptive traffic flow when said suspicious peak occurs at least in at least one of said specified number of periodograms obtained at said router for said others of said nodes and in at least one of said specified number of periodograms obtained at said other routers for said one of said nodes.

18. The computer-readable medium of claim 17, further containing instructions for controlling said processor to obtain said periodograms, by:

tracking times of arrival data;

transforming said times of arrival data into time-series;

parsing said time-series into windows; and

obtaining Lomb periodograms for said windows.

19. The computer-readable medium of claim 17, further containing instructions for controlling said processor to provide a signal to classify traffic flow using a Hidden Markov Model.

20. The computer-readable medium of claim 17, further containing instructions for controlling said processor to interrupt, by:

randomly removing data packets for a specified time;

determining, after said specified time, if said at least one peak at said frequency occurs in

at least one additional periodogram based on times of arrival of data packets since beginning said interrupting; and

returning to estimating based on including said additional periodograms with said specified number of periodograms when said at least one peak at said frequency occurs in said at least one additional periodogram.

21. A computer program, disposed on a computer-readable medium, for reducing spread of data on a network, said computer program including instructions for causing a processor to:

obtain a spectral analysis of times of arrival of data packets at receiving nodes of said network from sending nodes of said network over predetermined time periods;

for each pair of sending node and receiving node, mark transmissions of data packets for said pair as marked transmissions when said spectral analysis indicates peak frequencies associated with said marked transmissions are different from peak frequencies associated with others of said transmissions for said pair over a window of a predetermined number of said time periods;

mark transmissions of data packets as interruptible transmissions when marked transmissions from pairs having at least one of a common sending node and a common receiving node and within a specified number of said windows have corresponding frequencies;

estimate timing and length information for future data packets corresponding to said interruptible transmissions; and

interrupt traffic of said future data packets based on said estimating.

22. The computer program of claim 21, wherein said instructions to obtain a spectral analysis comprise instructions to:

track times of arrival data;

transform said times of arrival data into time-series;

parse said time-series into said windows; and

obtain Lomb periodograms for said windows.

23. The computer program of claim 21, wherein said instructions to estimate comprise instructions to apply a Hidden Markov Model technique to classify said interruptible transmissions as belonging to one of a plurality of classes of transmissions having determinable characteristics.

24. The computer program of claim 21, wherein said instructions to interrupt comprise instructions to randomly remove data packets.

25. The computer program of claim 24, wherein said instructions to interrupt further comprise instructions to:

interrupt for a specified time; and

determine, after said specified time, if a further spectral analysis of times of arrival of data packets since beginning to interrupt indicates said peak frequencies associated with said marked transmissions.

26. The computer program of claim 25, wherein said instructions to interrupt further comprise instructions to repeat said instructions to estimate based on said further spectral analysis when said further spectral analysis indicates said peak frequencies associated with said marked transmissions.